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(71) Anmelder *(für alle Bestimmungsstaaten mit Ausnahme von US)*: **P.A.L.M. MICROLASER TECHNOLOGIES AG** [DE/DE]; Am Neuland 12, 82347 Bernried (DE).

(72) Erfinder; und

(75) Erfinder/Anmelder *(nur für US)*: **SCHÜTZE, Karin** [DE/DE]; Lange Strasse 8a, 82327 Tutzing (DE). **SCHÜTZE, Raimund** [DE/DE]; Lange Strasse 8a, 82327 Tutzing (DE). **HERRMANN, Hendrik** [DE/DE]; Am Hölzlacker 1, 82407 Haunshofen (DE).

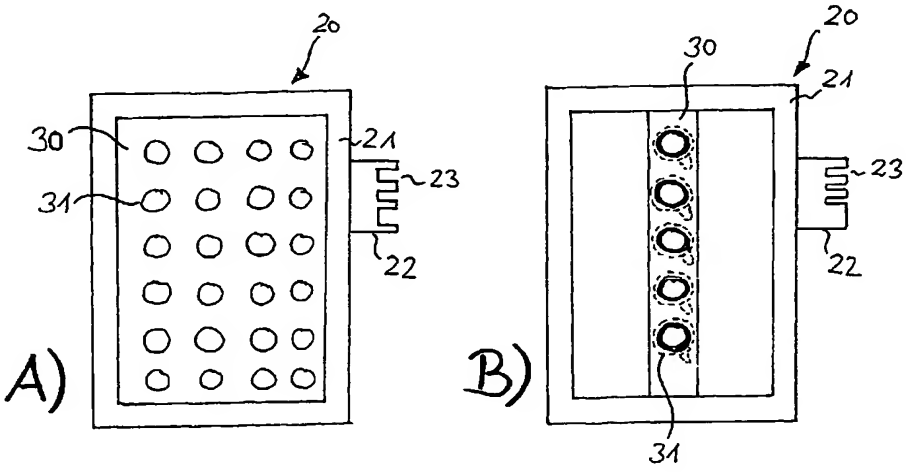
(74) Anwalt: **BANZER, Hans-Jörg**; KRAUS & WEISERT, Thomas-Wimmer-Ring 15, 80539 München (DE).

(81) Bestimmungsstaaten *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Fortsetzung auf der nächsten Seite]

(54) Title: SAMPLE HOLDER FOR A RECEPTION DEVICE RECEIVING BIOLOGICAL OBJECTS AND MICROSCOPE SYSTEM DESIGNED TO OPERATE USING ONE SUCH SAMPLE HOLDER

(54) Bezeichnung: HALTER FÜR EINE AUFNAHMEVORRICHTUNG ZUM AUFNEHMEN VON BIOLOGISCHEN OBJEKTEN UND MIKROSKOPSYSTEM FÜR DEN BETRIEB MIT EINEM DERARTIGEN HALTER



(57) Abstract: The invention relates to a sample holder (20) for reception devices receiving biological objects which can be used, for example, as collecting devices (30) in laser microdissection systems. Said sample holder (20) has a coding (23) by which means it can be clearly identified in the laser microdissection system, in order to then be able to correctly allocate biological objects (43) to be dissected to individual reception containers (31) of the identified reception device (30) or the identified sample holder (20), in such a way that a fully automatic microdissection process can be carried out.

[Fortsetzung auf der nächsten Seite]

WO 2004/045768 A1

English Translation of the Annexes of the International Preliminary Examination Report (Art. 34 Amendment)

PATENT CLAIMS

1. Laser microdissection system with a microscope (1) for observing a biological material (43) located on an object carrier (3),
with a laser device (4) for excising a biological object from the biological material (43) by means of laser radiation, and
with at least one holder (20) that is designed for use in the laser microdissection system in such a way that it can hold a receptacle device (30) provided for receiving the biological object excised from the biological material, for operation with the laser microdissection system,
characterised in that
the at least one holder (20) has a coding (23) that identifies the type of receptacle device (30),
identification means (32, 33) are provided for identifying the receptacle device (30) held in each case by the holder (20) by evaluating the coding (23) of the holder (20), and
control means (7) are provided and are designed in such a way that, depending on the receptacle device (30) identified in each case, they provide selection functions specific to the receptacle device for the allocation of individual biological objects to be excised from the biological material to individual receptacle containers (31) of the receptacle device (30) identified in each case.

2. Laser microdissection system according to claim 1, characterised in that the identification means (32, 33) are designed for the optical scanning of the coding (23) of the holder (20).

3. Laser microdissection system according to claim 1 or claim 2, characterised in that the identification means (32, 33) are designed for the inductive scanning of the coding (23) of the holder (20).

4. Laser microdissection system according to one of claims 1 to 3, characterised in that the identification means (32, 33) are designed for the capacitative scanning of the coding (23) of the holder (20).

5. Laser microdissection system according to one of claims 1 to 4, characterised in that the control means (7) are designed in such a way that, depending on the identified receptacle device (30), they form an image of the identified receptacle device (30) on a reproduction device (3).

6. Laser microdissection system according to one of claims 1 to 5, characterised in that the control means (7) are designed in such a way that, depending on the identified receptacle device (30), they provide selection functions specific to the receptacle device for the automatic manipulation of the receptacle device (30).

7. Laser microdissection system according to one of claims 1 to 6, characterised in that the control means (7) are

designed in such a way that, depending on the identified receptacle device (30), they manipulate in a manner specific to the receptacle device an adjustment device (2) of the microscope system to which the holder (20) is to be coupled, in order to position the receptacle device (30) in the microscope system with the aid of the adjustment device (2).

8. Laser microdissection system according to one of claims 1 to 7, characterised in that image recording means for recording an image of the receptacle device (30) are provided, and whereby the control means (7) are designed in such a way that, depending on the identified receptacle device (30), they manipulate the image recording means in a manner specific to the receptacle device in such a way that these automatically remove the receptacle device (30) in order to record an image of the receptacle device (30).

9. Laser microdissection system according to claim 8, characterised in that the control means (7) are designed in such a way that after a dissection procedure they automatically manipulate the image recording means in order to record the image of the receptacle device (30) at least in a region of those receptacle containers (31) in which the biological objects are dissected.

10. Laser microdissection system according to one of claims 1 to 9, characterised in that the control means (7) are designed in such a way that, depending on the identified receptacle device (30), they prepare in a manner spécific to the receptacle device a dissection protocol

for a dissection work sequence carried out with respect to the receptacle device (30).

11. Laser microdissection system according to one of claims 1 to 10, characterised in that the holder (20) comprises a frame (21) for holding the receptacle device (30).

12. Laser microdissection system according to one of claims 1 to 11, characterised in that the coding (23) is an optically scannable coding.

13. Laser microdissection system according to claim 12, characterised in that the coding (23) comprises comb-like projections that extend from the holder (20), whereby the receptacle device (30) is identified by the arrangement of the projections.

14. Laser microdissection system according to claim 12 or claim 13, characterised in that the coding (23) comprises a barcode.

15. Laser microdissection system according to one of the preceding claims, characterised in that the coding (23) comprises an inductive coding.

16. Laser microdissection system according to one of the preceding claims, characterised in that the coding (23) comprises a capacitative coding.

17. Laser microdissection system according to claim 15 or claim 16, characterised in that the coding (23) comprises a transponder.

18. Laser microdissection system according to one of the preceding claims, characterised in that the holder (20) is designed to hold a receptacle device (30) that is selected from a group comprising a cap, a tube, a microtitre plate and arrangements thereof.